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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/834,660

04/12/2001

Luan C. Tran

MI22-1637

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10/21/2003

WELLS ST. JOHN P.S.  
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SPOKANE, WA 99201

EXAMINER

SCHILLINGER, LAURA M

ART UNIT

PAPER NUMBER

2813

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/834,660

Applicant(s)

TRAN

Examiner

Laura M Schillinger

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-30 and 51-60 is/are pending in the application.
- 4a) Of the above claim(s) 51-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) all.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

**This Office Action is in response to Amendment C, dated 4/30/02.**

#### ***Election/Restrictions***

Newly submitted claims 51-60 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: they both require a shared common implant which the originally elected claims do not require, therefore they are distinct.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 51-60 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 21-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Krautschneider et al ('591).

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In reference to claim 21, Krautschneider et al teaches a method comprising:

Forming two series of FETs over a substrate (Col.9, lines:25-35), one being isolated from adjacent devices by STI (Col.6, lines: 15-20), the other having active area widths greater than 1um (Col.4, lines: 20-35) and , the one series being formed to have active area widths less than 1 um to achieve lower threshold voltages (TVs) than the other of the series (Col.6, lines: 35-45- teaching the correlation between the trench width and channel depletion width).

In reference to claim 22, Krautschneider et al teaches wherein the TVs for the 2 series of FETS are defined by a common channel implant (Col.6, lines: 20-30).

In reference to claim 23, Krautschneider et al teaches wherein the threshold voltages for the two series of FETs are defined by a common channel implant, the implant being the only channel implant which defines the TVs for the two series of FETs (Col.7, lines: 15-20).

In reference to claim 24, Krautschneider et al teaches wherein the TVs for the two series of FETs are defined by one or more common channel implants (Col.6, lines: 20-30 and Col.7, lines:15-20).

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In reference to claim 25, Krautschneider et al teaches wherein the TVs for the two series of FETs are defined by one or more common channel implants, the common channel implants being the only channel implants which define the TV for the two series of FETs (Col.7, lines:15-20).

In reference to claim 26, Krautschneider et al teaches a method of forming two series of FETs over a substrate (Col.9, lines:25-35), one being isolated from adjacent devices by STI (Col.6, lines: 15-20), and achieving different TVs by varying the active widths at least one series having active area widths less than 1um (Col.4, lines: 20-35 and Col.6, lines: 35-45- teaching the correlation between the trench width and channel depletion width).

In reference to claim 27, Krautschneider et al teaches wherein the TVs for the 2 series of FETS are defined by a common channel implant (Col.6, lines: 20-30).

In reference to claim 28, Krautschneider et al teaches wherein the threshold voltages for the two series of FETs are defined by a common channel implant, the implant being the only channel implant which defines the TVs for the two series of FETs (Col.7, lines: 15-20).

In reference to claim 29, Krautschneider et al teaches wherein the TVs for the two series of FETs are defined by one or more common channel implants (Col.6, lines: 20-30 and Col.7, lines:15-20)..

In reference to claim 30, Krautschneider et al teaches wherein the TVs for the two series of FETs are defined by one or more common channel implants, the common channel implants being the only channel implants which define the TV for the two series of FETs (Col.7, lines:15-20).

***Response to Arguments***

Applicant's arguments filed 4/30/02 have been fully considered but they are not persuasive. Applicant argues that Krautschneider et al (hereinafter '591 reference) fails to teach isolation by STI, although Applicant admits that the '591 reference teaches forming STI, the Applicant argues that such a structure is not depicted in the figures. This argument is not persuasive because the '591 reference does teach to form STI isolation structures and need not depict them to detail in the relevant figures in order to anticipate Applicant's claim.

Applicant argues that the active area widths taught by the '591 reference are of dimension "F" and proposes that such a teaching leads that there could not be varying widths. However this is not persuasive because F is a variable for a range of widths.

Applicant asserts that there is no mention of "threshold voltages" anywhere within the '591 reference however, this is not persuasive because the '591 repeatedly mentions threshold voltage (See for example col.3, lines: 20-36).

Applicant argues that the implant steps taught by the '591 reference are not common implants. However, the Applicant is reminded that claim language is interpreted giving its broadest reasonable interpretation. The common implant is understood to implant all n-type structures and p-type structures simultaneously. However it is not possible to dope both n-type and p-type together. Therefore the '591 reference does teach common n and p-type doing. IT

follows then that the '591 reference does teach that the threshold voltage is adjusted through a common implant in contrast to Applicant's conclusion.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M Schillinger whose telephone number is (703) 308-6425. The examiner can normally be reached on M-T, R-F 7:00-5:00.

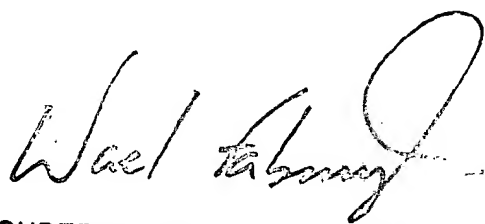
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W Whitehead, Jr. can be reached on (703) 308-4940. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the receptionist whose telephone number is (703) 308-0956.

LMS

October 19, 2003

A handwritten signature in black ink, appearing to read "Wael Labany". The signature is fluid and cursive, with a large loop at the end.

SUPERVISORY PRIMARY EXAMINER,  
TECHNOLOGY CENTER 2800